Appl. No. 09/493,984
Amdt. dated October 31, 2003
Preliminary Amendment

PATENT

REMARKS/ARGUMENTS

Disregard Previous Preliminary Amendment

On August 16, 2002, the Applicants filed a preliminary amendment. That amendment was premised on the mistaken belief that an earlier preliminary amendment had been filed that changed claims 8 and 14 and canceled claim 20. In fact, no earlier preliminary amendment had been filed.

Accordingly, please do not enter the preliminary amendment filed on August 16, 2002. The present amendment fixes the problem by setting forth the amendment filed on August 16, 2002 along with the amendment that was mistakenly believed to be filed before the August 16, 2002 amendment.

Present Amendment

In the present amendment, Claims 8 and 14 have been amended. Claim 20 has been canceled. Claims 21-23 have been added. Therefore, claims 1-23 are present for examination. If the fee for the extra claims wasn't already paid with the August 16, 2002 preliminary amendment, please deduct them from our deposit account.
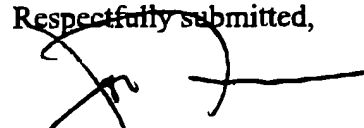
CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

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       If the Examiner believes a telephone conference would expedite prosecution of

this application, please telephone the undersigned at 303-571-4000.

                            Respectfully submitted,

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REMARKS/ARGUMENTS

Amendments

The specification is amended to correct an oversight that is grammatical, clerical or typographical in nature. Additionally, the claims are modified in the amendment. More specifically, claims 4 and 14 have been amended to correct clerical errors that do not affect claim scope. Therefore, claims 1-19 and 21-23 are present for examination. No new matter is added by these amendments. Applicant respectfully requests reconsideration of this application as amended.

35 U.S.C. §112 Rejection

Claim 4 is rejected under 35 U.S.C. §112 as being of improper dependent form for failing to further limit the subject matter of a previous claim. The amendment suggested by the Examiner is presented above.

35 U.S.C. §103 Rejection, Banker '938, Fischer and Banker '364

The Office Action has variously rejected the claims under 35 U.S.C. §103(a) as being unpatentable over cited portions of U.S. Patent No. 6,005,938 Banker et al. ("Banker '938") in view of cited portions of U.S. Patent No. 5,005,200 to Fischer ("Fischer") and U.S. Patent No. 5,247,364 to Banker et al. ("Banker '364"). The patent office is charged with putting forth a *prima facie* showing of obviousness. Applicants believe a *prima facie* case of obviousness has not been properly set forth in the Office Action. The basic test is excerpted below:

> "To establish a prima *facie case* of obviousness, three basic criteria
> must be met. First, there must be some suggestion or motivation, either in the
> references themselves or in the knowledge generally available to one of ordinary
> skill in the art, to modify the reference or to combine reference teachings.
> Second, there must be a reasonable expectation of success. Finally, the prior art
> reference (or references when combined) must teach or suggest all the claim

limitations." See MPEP §2143, Original Eighth Edition, August, 2001, Latest

Revision February 2003.

Applicants believe the rejection has flaws with all three prongs of the above test for establishing

a *prima facie* case of obviousness.

Teachings Missing from the Cited References

With regard to the third prong of the test, Applicants believe Banker '938, Fischer

and Banker '364 do not, either alone or in combination, teach or suggest the invention in the

claims. More specifically, none of Banker '938, Fischer and Banker '364 teach or suggest: (1)

having a signature over two or more data objects and separately sending the signature separately

from at least one of the data objects as generally required by all claims, or (2) that the signature

uses a different transmission pathway from the pathway used by at least one of the data objects

as required by claim 14. For least these reasons, Applicants respectfully request for

reconsideration of the rejection to the claims.

Summary of Cited References

Banker '938 teaches separate ECM, DEMM and AEMM messages 119, 108, 109.

Applicant cannot find where Banker '938 says if these are sent separately or grouped together,

only that the messages are packetized. <u>Banker '938</u>, col. 6, lines 52-54. Applicants don't know if

the packetization is just at the physical layer such that a single packet could contain multiple

messages. It is notable that the ECM 119, DEMM 108 and AEMM 109 each contain their own a

hash type signature 215, which appear in no way related to each other. <u>Id</u>., col. 4, lines 19-25;

Fig. 2; col. 5, lines 55-59.

Fischer is cited for the proposition that multiple objects could be signed together.

A seal 40 is created that is formed from the encrypted hash of a few messages. <u>Fischer</u>, col. 7,

line 63 through col. 8, line 15. It appears the seal 40 is transmitted with multiple objects that are

sealed. See <u>Id</u>., Fig. 8; <u>Id</u>., col. 24, lines 23-55.

Banker '364 is cited for the proposition that data objects can travel over different

transmission pathways. Some set top boxes have out-of-band data channels that receive data

regardless of the channel tuned to. <u>Banker '364</u>, col. 2, lines 55-69. In-band data requires that

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the set top box be tuned to that channel to receive that data by remote command. Id., col 1, lines 51-54. Notably, the words "signature," "hash," "checksum," and "encryption" appear nowhere in Banker '364.

First Missing Limitation: Separate Signature for Multiple Objects

All claims generally require having a signature over two or more data objects and separately sending the signature separately from at least one of the data objects. No reference appreciates this feature which provides more robust authentication of a data object. A pirate would have to gather the various data objects and find the appropriate signature to perfect any effort for hacking data objects. See Application, page 9, lines 11-16.

The robust authentication that is claimed is not found in any of the references. Banker '938 only teaches signatures on each message, which allows a hacker to easily associate a data object with its signature. Fischer generates a signature over multiple data objects, but apparently that signature is sent with the group of data objects, which again allows a hacker to easily associate the signature with the signed material.

Second Missing Limitation: Different Transmission Pathway for Signature

Claim 14 generally requires that the signature uses a different transmission pathway from the pathway used by at least one of the data objects. Banker '364 uses different transmission pathways, but only does so for compatibility reasons of systems that primarily use in-band control-data channels. There is no consideration of authentication issues or that separate channels give the ability to disassociate a data object from its signature as claimed.

Motivation to Combine Banker '938, Fischer and Banker '364

The first prong of the test requires, a suggestion or motivation to combine references to avoid hindsight reconstruction of the claimed invention based upon the information disclosed in the present application. The second half of the second paragraph in section 7 of the Office Action appears to address the motivation to combine Banker '938, and Fischer and the third and fourth sentences of section 11 appears to address the motivation to combine Banker '364. The Applicants believes this falls short of what is required. The following excerpt is believed apt in the present case:

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"In the instant application, the examiner has done little more than
cite references to show that one or more elements or subcombinations thereof,
when each is viewed in a vacuum, is known. The claimed invention, however, is
clearly directed to a combination of elements. That is to say, appellant does not
claim that he has invented one or more new elements but has presented claims to
a new combination of elements. To support the conclusion that the claimed
combination is directed to obvious subject matter, either the references must
expressly or impliedly suggest the claimed combination or the examiner must
present a convincing line of reasoning as to why the artisan would have found the
claimed invention to have been obvious in light of the teachings of the
references." Ex parte Clapp, 227 USPQ 972, 973 (B.P.A.I. 1985)

The only way one of ordinary skill in the art would cobble together the various
elements from Banker '938, Fischer and Banker '364 is by using the claims as a template. This is
impermissible hindsight reconstruction. Reconsideration is respectfully requested.

Reasonable Likelihood of Success in Combining Banker '938, Fischer and Banker '364

The second prong of the test requires a reasonable likelihood of success in making
the combination. How would one of ordinary skill in the art hope to combine these references
with any likelihood of success? The Office Action suggests picking and choosing features from
each reference, but gives no reasoning why one would choose one element and avoid others.

A brute force combination of these references as suggested, simply would not
work. Fischer creates a group of data objects with one signature, but Banker '938 requires these
messages to be separate. Further, Banker '364 requires that these messages be sent down
separate transmission pathways. How would one of ordinary skill in the art break apart the
group of Fischer? Which piece of the group would have the omnibus signature, or would both
have it? Which channel from Banker '364 would get which piece? These questions are not
answered by these references.

Any likelihood of success in combining these references is not reasonable.
Reconsideration is respectfully requested.

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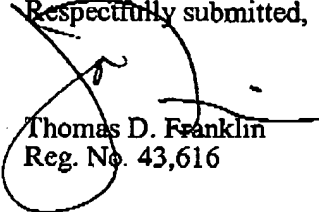Reply to Office Action of October 28, 2003

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<u>CONCLUSION</u>

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance and an action to that end is urged. Reconsideration of the claims in their current form is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 303-571-4000.

Respectfully submitted,

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